

C L A I M S

1. A vacuum process system comprising:

a load port on which a plurality of objects to be processed is set;

5 a common transfer chamber disposed adjacent to the load port, having an internal space set at an atmospheric pressure level, and including a first transfer device that is movable and transfers the at least one of said plurality of objects into/from the
10 load port, the first transfer device being disposed within the internal space; and

a plurality of process units each having one process chamber for subjecting the object to a predetermined process, and a vacuum transfer chamber
15 connected to the process chamber, the process chamber having an internal space set at a vacuum pressure level, and including a second transfer device for transferring the object into/from the process chamber, the second transfer device being disposed within the internal
20 space of the process chamber,

characterized in that a plurality of said process units are individually connected to the common transfer chamber such that the process units are substantially parallel to each other, and

25 the vacuum transfer chamber of each process unit is connected to the common transfer chamber, each process unit extends linearly in a direction

substantially perpendicular to the common transfer chamber, and the object is transferred into/from the vacuum transfer chamber by means of the first transfer device.

5 2. A vacuum process system according to claim 1, characterized in that the first transfer device moves substantially in a longitudinal direction of the common transfer chamber, and each process unit extends linearly in a direction perpendicular to
10 the longitudinal direction of the common transfer chamber.

 3. A vacuum process system according to claim 1, characterized in that each process unit is detachably connected to the common transfer chamber.

15 4. A vacuum process system according to claim 3, characterized in that at least one extension transfer chamber is detachably connected to the common transfer chamber, and the first transfer device is movable over
20 a range of the common transfer chamber and the extension transfer chamber.

 5. A vacuum process system according to claim 4, characterized in that the process unit is detachably connected to the extension transfer chamber.

25 6. A vacuum process system according to claim 4 or 5, characterized in that the extension transfer chamber is provided with a third transfer device that is movable and transfers the object between the load

port and the vacuum transfer chamber of each process unit.

7. A vacuum process system according to claim 6, characterized in that the third transfer device is
5 movable over a range of the common transfer chamber and the extension transfer chamber.

8. A vacuum process system according to claim 1, characterized in that the vacuum transfer chambers of adjacent ones of the process units are mutually
10 connected via an intermediate path chamber that can be set at a predetermined vacuum pressure level,

an openable/closable gate valve is provided between the intermediate path chamber and each vacuum transfer chamber, and

15 the object is transferred into/from the intermediate path chamber by means of the second transfer chamber.

9. A vacuum process system according to claim 8, characterized in that a control section for controlling
20 operations of the first and second transfer devices is provided to enable the object to be successively transferred to the process units via the intermediate path chamber.

10. A vacuum process system according to claim 1,
25 characterized in that the common transfer chamber comprises a rectangular container.

11. A vacuum process system according to claim 1,

characterized in that an alignment mechanism for aligning the object is provided in the vacuum transfer chamber.

12. A vacuum process system according to claim 1,
5 characterized in that the vacuum transfer chamber comprises a transfer chamber including the second transfer device, disposed adjacent to the process chamber, and always set at a predetermined vacuum pressure level, and a load lock chamber for connecting
10 the transfer chamber and the common transfer chamber, the load lock chamber having an internal space that can be selectively set at an atmospheric pressure level and a vacuum pressure level.

13. A vacuum process system according to claim 1,
15 characterized in that the vacuum transfer chamber comprises a load lock chamber for connecting the process chamber and the common transfer chamber, the load lock chamber having an internal space that can be selectively set at an atmospheric pressure level and a
20 vacuum pressure level.

14. A vacuum process system according to claim 13,
characterized in that the second transfer device has a support portion for supporting the object, and the support portion is movable only linearly to transfer
25 the object.

15. A vacuum process system according to claim 13,
characterized in that the vacuum transfer chamber

includes two buffers on which the object is placed in a standby state.